

H01N2-D HEAVY DUTY FLEXIBLE WELDING CABLE



These cables serve as connections for welding robots in automotive industries, shipyards, and both manual and automated welding operations, as well as for interconnecting battery cables or battery storage systems. Their durable structure ensures resistance to extreme temperatures, ozone, radiation, oils, acids, fats, and petroleum products.

| | |
|-------------------------------|---|
| CONDUCTOR | Plain Copper |
| STRANDING | Class 6 |
| OUTERSHEATH | PCP |
| OUTERSHEATH COLOUR | Black |
| MINIMUM BENDING RADIUS | Overall Bending Radius 6x |
| OPERATING TEMPERATURE | 85°C |
| STANDARDS | EN 50525-2-81, EN60228, HD 22.6, VDE 0282-6, BS638 PART 4 Flame Retardant according to IEC/EN 60332-1-2 |

SPECIFICATION DATA

DE-RATING FACTORS

| Ambient Temperature | 25°C | 30°C | 35°C | 40°C | 45°C | 50°C | 55°C |
|---------------------|------|------|------|------|------|------|------|
| De-Rating Factor | 1 | 0.96 | 0.91 | 0.87 | 0.82 | 0.76 | 0.71 |

ELECTRICAL CHARACTERISTICS

Current Carrying Capacity

| Nominal Cross Sectional Area mm ² | Current Rating for Single Cycle Operation Over a Maximum Period of 5 Minutes Amps 100% | Current Rating for Single Cycle Operation Over a Maximum Period of 5 Minutes Amps 85% | Current Rating for Single Cycle Operation Over a Maximum Period of 5 Minutes Amps 60% | Current Rating for Single Cycle Operation Over a Maximum Period of 5 Minutes Amps 35% |
|--|--|---|---|---|
| 10 | 100 | 103 | 108 | 122 |
| 16 | 135 | 145 | 175 | 230 |
| 25 | 180 | 195 | 230 | 300 |
| 35 | 225 | 245 | 290 | 375 |
| 50 | 285 | 305 | 365 | 480 |
| 70 | 355 | 385 | 460 | 600 |
| 95 | 430 | 470 | 560 | 730 |
| 120 | 500 | 540 | 650 | 850 |
| 150 | 580 | 630 | 750 | 980 |

Ambient Air Temperature: 25°C Maximum Conductor Temperature: 85°C The above table is from HD 516 S2:1997 Duty Cycle and Current Carrying Capacity The current carrying capacity of a welding cable depends on the length of the duty cycle. The duty cycle is the length of time during which a loaded current passes through the cable over an operation period of 5 minutes, expressed as a percentage of that period. For example, if the current is flowing for the whole 5 minutes the duty cycle is 100%, and if the current is flowing for 1 minute the duty cycle is 20%. As conductor temperature varies according to the time in use as well as current, ratings shown are given as a guide. The permissible loading of the cable for duty cycles other than those shown in the table can be calculated using the following formula: $I = I_{100} \times \sqrt{100/F}$ Where: I : is the maximum permissible loading current for the required duty cycle. I₁₀₀ : is the maximum permissible loading current for a duty cycle of 100%. F : is the required duty cycle calculated as a percentage of the 5 minute operation period. Typical guidance values for different welding processes are as follows: Fully automatic welding 100% Semi-automatic welding 65 - 85% Manual Welding 30 - 60% Very infrequent or occasional welding 20%

CONDUCTORS

Flexible Copper Conductors for Single Core Cables

| Nominal Cross Sectional Area mm ² | Maximum Diameter of Wires in Conductor mm | |
|--|---|-------|
| 10 | 0.21 | 1.91 |
| 16 | 0.21 | 1.21 |
| 25 | 0.21 | 0.78 |
| 35 | 0.21 | 0.554 |
| 50 | 0.21 | 0.386 |
| 70 | 0.21 | 0.272 |
| 95 | 0.21 | 0.206 |
| 120 | 0.51 | 0.161 |
| 150 | 0.51 | 0.129 |

CORE CODES

| Colour | Black | Red |
|--------|-------|-----|
| Code | E | RD |

DIMENSIONS

| BATT Part No | Cores | Nominal cross sectional area of conductor | Radial thickness of insulation | Approx overall diameter | Weight |
|--------------|-------|---|--------------------------------|-------------------------|--------|
| 19011 | 1 | 16 | | 9.5 | 210 |
| 19013 | 1 | 25 | | 11 | 300 |
| 19014 | 1 | 35 | | 12 | 400 |
| 19015 | 1 | 50 | | 14 | 560 |
| 19019 | 1 | 70 | | 16.5 | 780 |
| 19020 | 1 | 95 | | 18.5 | 1010 |
| 19021 | 1 | 120 | | 20 | 1250 |

The information in this datasheet is for guidance only and subject to change without liability. Images provided are representations; actual cable dimensions may vary due to manufacturing tolerances.

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